CLAIMS

1.

A mass of crystals having a size of less than 100 microns and in which mass the majority of the crystals are faceted single crystals.

2.

A mass of crystals according to claim 1 wherein at least 80% of the mass are faceted single crystals.

3.

A mass of crystals according to claim 1 or claim 2 wherein the crystals are diamond crystals.

4.

A method of producing a mass of crystals, which are predominantly macroscopically faceted single crystals, includes the steps of providing a source of crystals of the type to be grown and which are substantially free of macroscopically faceted surfaces, producing a reaction mass by bringing the source into contact with a suitable solvent/catalyst, subjecting the reaction mass to conditions of elevated temperature and pressure suitable for crystal growth in the reaction zone of a high temperature/high pressure apparatus, removing the reaction mass from the reaction zone and recovering the crystals from the reaction mass, the conditions of crystal growth being chosen such that the source crystals are converted to crystals having developed macroscopic facets of low Miller index.

5.

A method according to claim 4 wherein the mass of crystals contains at least 80% of macroscopically faceted single crystals.

6.

A method according to claim 5 wherein the crystals are diamond crystals.

7.

A method according to claim 6 wherein the elevated temperature is in the range of 1100 to 1500°C and the elevated pressure in the range of 4,5 to 7 GPa.

8.

A method according to any one of claims 4 to 7 wherein the supersaturation driving force necessary for crystal growth is generated predominantly by the difference in surface free energy between low Miller index surfaces and high Miller index surfaces of the source crystals.

9.

A method according to any one of claims 4 to 8 wherein the Wulff effect dominates.